SEQUENCE LISTING

<110> Children's Medical Center
Ren, Dejian
Clapham, David

<120> Sperm-Specific Calcium Channel Gene, Expressing Calcium Channel Protein, and In-Vitro as a System for Detecting Male Infertility

<130> 110313.130 PCT

<150> US 60/288,402
<151> 2001-05-03

<160> 6

<170> FastSEQ for Windows Version 4.0

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<211> 2343
<212> DNA
<213> Homo sapiens

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<213> Homo sapiens

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Arg Pro Gly His Ser Arg Ala Leu His His Tyr Glu Leu His His His
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Gly Val Pro His Gln Arg Gly Glu Ser His His Pro Pro Glu Phe Gln
    50                  55                  60
Asp Phe His Asp Gln Ala Leu Ser Ser His Val His Gln Ser His His
65                  70                  75                  80
His Ser Glu Ala Arg Asn His Gly Arg Ala His Gly Pro Thr Gly Phe
                85                  90                  95
Gly Leu Ala Pro Ser Gln Gly Ala Val Pro Ser His Arg Ser Tyr Gly
            100                 105                 110
Glu Asp Tyr His Asp Glu Leu Gln Arg Asp Gly Arg Arg His His Asp
        115                 120                 125
Gly Ser Gln Tyr Gly Gly Phe His Gln Gln Ser Asp Ser His Tyr His
    130                 135                 140
Arg Gly Ser His His Gly Arg Pro Gln Tyr Leu Gly Glu Asn Leu Ser
145                 150                 155                 160
His Tyr Ser Ser Gly Val Pro His His Gly Glu Ala Ser His His Gly
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Gly Ser Tyr Leu Pro His Gly Pro Asn Pro Tyr Ser Glu Ser Phe His
            180                 185                 190
His Ser Glu Ala Ser His Leu Ser Gly Leu Gln His Asp Glu Ser Gln
        195                 200                 205
His His Gln Val Pro His Arg Gly Trp Pro His His His Gln Val His
    210                 215                 220
His His Gly Arg Ser Arg His His Glu Ala His Gln His Gly Lys Ser
225                 230                 235                 240
Pro His His Gly Glu Thr Ile Ser Pro His Ser Ser Val Gly Ser Tyr
                245                 250                 255
Gln Arg Gly Ile Ser Asp Tyr His Ser Glu Tyr His Gln Gly Asp His
            260                 265                 270
His Pro Ser Glu Tyr His His Gly Asp His Pro His His Thr Gln His
        275                 280                 285
His Tyr His Gln Thr His Arg His Arg Asp Tyr His Gln His Gln Asp
    290                 295                 300
His His Gly Ala Tyr His Ser Ser Tyr Leu His Gly Asp Tyr Val Gln
305                 310                 315                 320
Ser Thr Ser Gln Leu Ser Ile Pro His Thr Ser Arg Ser Leu Ile His
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Asp Ala Pro Gly Pro Ala Ala Ser Arg Thr Gly Val Phe Pro Tyr His
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Val Ala His Pro Arg Gly Ser Ala His Ser Met Thr Arg Ser Ser Ser
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Thr Ile Arg Ser Arg Val Thr Gln Met Ser Lys Lys Val His Thr Gln
    370                 375                 380
Asp Ile Ser Thr Lys His Ser Glu Asp Trp Gly Lys Glu Glu Gly Gln
385                 390                 395                 400
Phe Gln Lys Arg Lys Thr Gly Arg Leu Gln Arg Thr Arg Lys Lys Gly
                405                 410                 415
His Ser Thr Asn Leu Phe Gln Trp Leu Trp Glu Lys Leu Thr Phe Leu
            420                 425                 430
Ile Gln Gly Phe Arg Glu Met Ile Arg Asn Leu Thr Gln Ser Leu Ala
        435                 440                 445
Phe Glu Thr Phe Ile Phe Phe Val Val Cys Leu Asn Thr Val Met Leu
    450                 455                 460
Val Ala Gln Thr Phe Ala Glu Val Glu Ile Arg Gly Glu Trp Tyr Phe
465                 470                 475                 480
Met Ala Leu Asp Ser Ile Phe Phe Cys Ile Tyr Val Val Glu Ala Leu
                485                 490                 495
Leu Lys Ile Ile Ala Leu Gly Leu Ser Tyr Phe Phe Asp Phe Trp Asn
            500                 505                 510
Asn Leu Asp Phe Phe Ile Met Ala Met Ala Val Leu Asp Phe Leu Leu
        515                 520                 525
Met Gln Thr His Ser Phe Ala Ile Tyr His Gln Ser Leu Phe Arg Ile
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Leu Lys Val Phe Lys Ser Leu Arg Ala Leu Arg Ala Ile Arg Val Leu
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Arg Arg Leu Ser Phe Leu Thr Ser Val Gln Glu Val Thr Gly Thr Leu
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Gly Gln Ser Leu Pro Ser Ile Ala Ala Ile Leu Ile Leu Met Phe Thr
            580                 585                 590
Cys Leu Phe Leu Phe Ser Ala Val Leu Arg Ala Leu Phe Arg Lys Ser
        595                 600                 605
Asp Pro Lys Arg Phe Gln Asn Ile Phe Thr Thr Ile Phe Thr Leu Phe
    610                 615                 620
Thr Leu Leu Thr Leu Asp Asp Trp Ser Leu Ile Tyr Met Asp Ser Arg
625                 630                 635                 640
Ala Gln Gly Ala Trp Tyr Ile Ile Pro Ile Leu Ile Ile Tyr Ile Ile
                645                 650                 655
Ile Gln Tyr Phe Ile Phe Leu Asn Leu Val Ile Thr Val Leu Val Asp
            660                 665                 670
Ser Phe Gln Thr Ala Leu Phe Lys Gly Leu Glu Lys Ala Lys Gln Glu
        675                 680                 685
Arg Ala Ala Arg Ile Gln Glu Lys Leu Leu Glu Asp Ser Leu Thr Glu
    690                 695                 700
Leu Arg Ala Ala Glu Pro Lys Glu Val Ala Ser Glu Gly Thr Met Leu
705                 710                 715                 720
Lys Arg Leu Ile Glu Lys Lys Phe Gly Thr Met Thr Glu Lys Gln Gln
                725                 730                 735
Glu Leu Leu Phe His Tyr Leu Gln Leu Val Ala Ser Val Glu Gln Glu
            740                 745                 750
Gln Gln Lys Phe Arg Ser Gln Ala Ala Val Ile Asp Glu Ile Val Asp
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Thr Thr Phe Glu Ala Gly Glu Glu Asp Phe Arg Asn
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<211> 2061
<212> DNA
<213> Murine Catsper 1

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ggtgggttcc atcaacaaaa tgaattgcag catttgcgtg agttctcaga ctcccatgac 240
aatgctttct cccatcattc ctatcagcag gacagggctg gtgtctctac cttacctaat 300
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<212> PRT
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            20   25   30
Pro Thr Leu His Arg Pro Asn Gln Gly Gly Val Tyr Tyr Asp Ser Pro
        35   40   45
Gln His Gly Met Phe Gln Gln Pro Tyr Gln Gln His Gly Gly Phe His

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    50                  55                  60
Gln Gln Asn Glu Leu Gln His Leu Arg Glu Phe Ser Asp Ser His Asp
65                  70                  75                  80
Asn Ala Phe Ser His His Ser Tyr Gln Gln Asp Arg Ala Gly Val Ser
                85                  90                  95
Thr Leu Pro Asn Asn Ile Ser His Ala Tyr Gly Gly Ser His Pro Leu
            100                 105                 110
Ala Glu Ser Gln His Ser Gly Gly Pro Gln Ser Gly Pro Arg Ile Asp
        115                 120                 125
Pro Asn His His Pro His Gln Asp Asp Pro His Arg Pro Ser Glu Pro
    130                 135                 140
Leu Ser His Pro Ser Ser Thr Gly Ser His Gln Gly Thr Thr His Gln
145                 150                 155                 160
Gln Tyr His Glu Arg Ser His His Leu Asn Pro Gln Gln Asn Arg Asp
                165                 170                 175
His Ala Asp Thr Ile Ser Tyr Arg Ser Ser Thr Arg Phe Tyr Arg Ser
            180                 185                 190
His Ala Pro Phe Ser Arg Gln Glu Arg Pro His Leu His Ala Asp His
        195                 200                 205
His His Glu Gly His His Ala His Ser His His Gly Glu His Pro His
    210                 215                 220
His Lys Glu Gln Arg His Tyr His Gly Asp His Met His His His Ile
225                 230                 235                 240
His His Arg Ser Pro Ser Ala Ser Gln Leu Ser His Lys Ser His Ser
                245                 250                 255
Thr Leu Ala Thr Ser Pro Ser His Val Gly Ser Lys Ser Thr Ala Ser
            260                 265                 270
Gly Ala Arg Tyr Thr Phe Gly Ala Arg Ser Gln Ile Phe Gly Lys Ala
        275                 280                 285
Gln Ser Arg Glu Ser Leu Arg Glu Ser Ala Ser Leu Ser Glu Gly Glu
    290                 295                 300
Asp His Val Gln Lys Arg Lys Lys Ala Gln Arg Ala His Lys Lys Ala
305                 310                 315                 320
His Thr Gly Asn Ile Phe Gln Leu Leu Trp Glu Lys Ile Ser His Leu
                325                 330                 335
Leu Leu Gly Leu Gln Gln Met Ile Leu Ser Leu Thr Gln Ser Leu Gly
            340                 345                 350
Phe Glu Thr Phe Ile Phe Ile Val Val Cys Leu Asn Thr Val Ile Leu
        355                 360                 365
Val Ala Gln Thr Phe Thr Glu Leu Glu Ile Arg Gly Glu Trp Tyr Phe
    370                 375                 380
Met Val Leu Asp Ser Ile Phe Leu Ser Ile Tyr Val Leu Glu Ala Val
385                 390                 395                 400
Leu Lys Leu Ile Ala Leu Gly Leu Glu Tyr Phe Tyr Asp Pro Trp Asn
                405                 410                 415
Asn Leu Asp Phe Phe Ile Met Val Met Ala Val Leu Asp Phe Val Leu
            420                 425                 430
Leu Gln Ile Asn Ser Leu Ser Tyr Ser Phe Tyr Asn His Ser Leu Phe
        435                 440                 445
Arg Ile Leu Lys Val Phe Lys Ser Met Arg Ala Leu Arg Ala Ile Arg
    450                 455                 460
Val Leu Arg Arg Leu Ser Ile Leu Thr Ser Leu His Glu Val Ala Gly
465                 470                 475                 480
Thr Leu Ser Gly Ser Leu Pro Ser Ile Thr Ala Ile Leu Thr Leu Met
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Phe Thr Cys Leu Phe Leu Phe Ser Val Val Leu Arg Ala Leu Phe Gln
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Asn Arg Ala Gln Gly Ala Trp Tyr Ile Ile Pro Ile Leu Met Ile Tyr
545                 550                 555                 560
Ile Val Ile Gln Tyr Phe Ile Phe Leu Asn Leu Val Ile Ala Val Leu
                565                 570                 575
Val Asp Asn Phe Gln Met Ala Leu Leu Lys Gly Leu Glu Lys Val Lys
            580                 585                 590
Leu Glu Gln Ala Ala Arg Val His Glu Lys Leu Leu Asp Asp Ser Leu
        595                 600                 605
Thr Asp Leu Asn Lys Ala Asp Ala Asn Ala Gln Met Thr Glu Glu Ala
    610                 615                 620
Leu Lys Met Gln Leu Ile Glu Gly Met Phe Gly Asn Met Thr Val Lys
625                 630                 635                 640
Gln Arg Val Leu His Phe Gln Phe Leu Gln Leu Val Ala Ala Val Glu
                645                 650                 655
Gln His Gln Gln Lys Phe Arg Ser Gln Ala Tyr Val Ile Asp Glu Leu
            660                 665                 670
Val Asp Met Ala Phe Glu Ala Gly Asp Asp Asp Tyr Gly Lys
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<213> Mouse CatSper1

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<210> 6
<211> 498
<212> DNA
<213> Mouse CatSper1

<220>
<221> misc_feature
<222> 445, 480
<223> n = A,T,C or G

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aaaaacccctg gagggctctg tgtccttact ggctagcctg aagcaaaggt caagaggcaa 180
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